SAVE THE CHILDREN.

Report on the Physical Welfare of Mothers and Children in England and Wales.

The first week of July, 1917, is to be dedicated to the consideration of the physical welfare of the mothers and children of our country. The preservation of health and efficiency is always a matter of national importance, and this importance has been recognised with increasing clearness by governments, philanthropists, economists, doctors, and the public. Since the beginning of the present century a constantly increasing effort has been made to reduce the mortality of mothers and children, and this effort has achieved a considerable measure of success.

Among the evidences of this national effort, and also among the intelligent means for securing its successful result, must be numbered the monumental investigation undertaken by the Carnegie United Kingdom Trustees and carried out for them by E. W. Hope, Esq., M.D., D.Sc., Medical Officer of Health for Liverpool, and by Miss Janet M. Campbell, M.D., M.S., one of the Senior Medical Officers of the Board of Education, in respect of England and Wales; by W. Leslie Mackenzie, Esq., M.D., LL.D., F.R.C.P.E., F.R.S.E., Medical Member of the Local Government Board for Scotland, so far as Scotland is concerned; and by E. Cooey Bigger, Esq., M.D., M.Ch., Medical Commissioner of the Local Government Board for Ireland, in respect of Ireland.

The results of the investigations made by these distinguished officers are presented to the public in four handsome volumes which constitute a mine of valuable information, up to date, clear, interesting, and suggestive. The text is corroborated and illuminated by photographs, maps, charts, and diagrams in rich profusion, while the clearness of type, ample spacing, and general excellence of printing make the work of the student of these volumes easy and fruitful.

In a note by the Medical Officer of the Local Government Board for England and Wales our attention is directed to "the immediate need for further national effort to reduce sickness and mortality among child-bearing mothers, and the closely-related mortality among infants before birth and in the first month after live-birth."

He further points out that this mortality is still excessive; and that every week we lose 67 mothers as the result of pregnancy and parturition; and that of this number no less than 24, more than one-third, are due to puerperal infections. These losses are very heavy; they are to a large extent preventable, and they ought to be prevented.

The campaign against these deaths is made hopeful by the fact that already a reduction has occurred, from 136 per million in 1890 to 75 per million in 1914. This enormous improvement has been most marked since the Midwives Act was passed in 1902. The figures being:—

YEAR.						
1890	deaths	per	million	...	...	136
1895	,,	,,	,,	...	...	123
1902	,,	,,	,,	...	...	118
1907	,,	,,	,,	...	...	82

The rate of improvement does not continue as it should do, for in 1914 the deaths from puerperal sepsis numbered 75 per million, an inadequate fall for the lapse of seven years.

A fact of hopeful import cited by Sir Arthur Newsholme is that maternal mortality has decreased most markedly in areas where skilled midwifery assistance is most readily obtainable, and in rural areas, where sepsis is less prevalent than in the crowded and insanitary districts of towns and cities.

In this connection it is very interesting to note that London occupies a unique position. Its rate of maternal mortality from puerperal sepsis is represented by 0.067, while that of county boroughs is 0.076, and rural districts is 0.055, not an excessive balance against a huge area containing many crowded and insanitary districts. But in the matter of maternal deaths from all other causes London, with its 0.072, shows up well against county boroughs with 0.125 and rural districts with 0.130. The

heavy maternal mortality from causes of death in connection with childbirth other than sepsis must be attributed to a deficient supply of skilled professional assistance. If it were due entirely to want of good air or to decadence of the mothers the heaviest mortality should be in London, and not in the country.

What London has done other districts, whether urban or rural, can do, granted the expenditure of sufficient thought, time, and money, and what London has so well begun she can continue until much more saving of valuable lives can be placed to her credit.

In his introduction to the Report Dr. Hope dwells on the interest in the subject, which has increasingly developed, especially since the beginning of this century, and in the gratifying measure of success that has been attained, but he points out how sadly the conditions of childbearing women and little children still fail to reach anything approximating a natural level (otherwise, why should Hampstead show a maternal mortality of 3.75 and an infantile mortality of 76 per thousand, while the corresponding figures for Shoreditch are 9.7 and 163?).

Sir Arthur Newsholme, Dr. Hope, and Dr. Janet Campbell all emphasise the fact that one-fifth of the heavy infantile mortality during the first year of life occurs in the first week after birth, and one-third occurs before the end of the first month, this being "highly suggestive of the association of ante-natal conditions of the expectant mother with the ultimate prospects of life and well-being of the offspring."

An erroneous idea that has gained possession of many minds is that in the matter of rearing satisfactory children it is a question of quality versus quantity, that a low birth-rate ensures a low death-rate, and that it is better to have a moderate number of efficient citizens rather than a large but sickly and unsatisfactory population. The facts and figures of the Report under consideration do not appear to support this view. Dr. Hope tells us: "It is an almost invariable rule that a low birth-rate is accompanied by a low rate of infantile mortality, but the districts with high birth-rates, notwithstanding that a larger proportion of babies perish in infancy, have relatively and

actually a larger number of infants living at the end of the year than districts with a low birth-rate."[1]

The further contention that the survivors of those who perish are likely to be healthier where the birth-rate is low does not seem to be founded on fact, but in any case the admirable returns of the medical officers of health attached to Volume I. of the Report unite in showing how much has been done and how much more still remains to be done in the national duty of saving our childbearing women and infants.

Causes of Mortality of Women during Pregnancy, Childbirth, and Puerpery.

Pregnancy, childbirth, and suckling are the supreme tests of the soundness of a woman's health, and are likely to develop and to demonstrate any latent flaw. Many women who enjoy average health up to the time of pregnancy break down under the double strain of providing for the growth and development of the child on the one hand, and of securing the evacuation of the increased refuse of their bodies on the other. During pregnancy the expectant mother needs more food, or better and more nourishing food, than when she has simply to maintain her own nutritional equipoise. Therefore, if she cannot secure sufficient and suitable food she is to some extent starved, her tissues are ill-nourished, and her strength declines. These conditions may cause want of the muscular strength which is necessary for safe parturition, and are also likely to interfere with the mother's convalescence from childbirth and with her ability to suckle her child.

On the other hand, should her organs of elimination not be adequate, or should some perversion of her functions occur, a process of self-poisoning occurs, and will show itself in one or more of the "toxic diseases of pregnancy." To the accumulation of toxins in the mother's tissues are due pernicious vomiting, albuminuria, convulsions, and other dangerous con-

[1] In a table on page 3 of the Report: "Of a few towns arranged in descending order of birth-rate for 1901-3 the infant mortality rate and the number of survivors at the end of the first year of age are given. The changes of birth-rate and the number of survivors ten years later, as well as in 1915, show that, in spite of the successful efforts in preserving the babies who are born, yet the relative numerical gain remains with the districts having the higher birth-rate, even though the rate of survival is lower."

ditions which are likely to cause the invaliding or death of the mother, and in consequence the miscarriage, or dead-birth, of the child.

Some women who now perish might weather the storm of pregnancy if their circumstances were favourable, but they are unable to do so because they are handicapped by poverty, overwork, or accidental disease.

When the husband's wages are too small to provide sufficiently for the needs of his family, or when the wages are not well managed, the pregnant woman is likely to be short of such necessaries of life as food, warmth, and clothing. These economic conditions are disastrous in themselves, and may also lead to the expectant mother undertaking paid work which is too heavy or too long continued. In all such cases she is injured either by semi-starvation or by laborious work which exhausts her strength, and so renders her an easy victim to the diseases of pregnancy or to the difficulties of parturition.

Pregnancy may be complicated by one or more of the great racial poisons—*alcohol, tuberculosis,* and *syphilis*. The evil effects of alcohol on the pregnant woman are direct and indirect. The direct effects are seen in deterioration of digestion, nutrition, and elimination, and the indirect effects appear in the lessened ability of the victim to maintain decency and well-being, personal and household.

Tubercle, especially pulmonary tuberculosis, sometimes develops rapidly during pregnancy, and is apt to come to a fatal termination soon after parturition. The effect on the child is partly due to the frailty of body which it inherits, and partly to the loss of suckling and maternal care. Tuberculosis does not develop in infants during intra-uterine life, and is extremely rare before the sixth or seventh month after birth.

Syphilis, on the other hand, is one of the most frequent causes of intra-uterine death, that is, of miscarriages in the second half of pregnancy, of premature and still-births. It is also the cause of many deaths during the first year of life, and especially of those which occur during the first month. In the Report under review syphilis, as such, appears to be responsible for a small number of deaths, some 1,200 or so, but it is the

efficient cause of much of the premature birth, atrophy, and congenital conditions which account for close on 32,000 infant deaths every year.

Bad housing is a very serious injury to the health and to the morals of our people, both in town and country. It entails overcrowding, bad ventilation, absence of larders, insufficiency of sanitary conveniences and of inadequate water supply. The natural fatigues and disabilities of pregnancy are aggravated by the want of the decencies and amenities of life and the effect on welfare in general is indicated by the fact that infant mortality rises in proportion to want of house room and its consequences. Thus:—

Family living in one room—infant mortality represented by						19.3
,,	,,	two rooms	,,	,,	,,	18.4
,,	,,	three rooms	,,	,,	,,	14.
,,	,,	four rooms	,,	,,	,,	10.

The Dangers to Mothers and Children during Parturition.

The dangers to mothers and children during parturition depend partly on their ante-natal conditions. The woman who has been ill, underfed, or overworked during pregnancy comes to her hour of trial badly handicapped. The woman whose nerves, muscles, and internal organs are physiologically perfect comes with victory in her hands. Unfortunately, the women who are the worst prepared for the conflict are also those who are least able to secure prompt and efficient help. There is but little accommodation for them in hospitals, they cannot afford skilled medical attendance, and there is not a sufficient supply of trained and experienced midwives. The consequences are disastrous to the poor women and their infants, to their families, and to the community.

Post-Natal Conditions.

One of the most important conditions of infant welfare is that its mother should be able to suckle it, and that her milk should be both good and abundant. It is unlikely that these conditions should be fulfilled if the mother be badly housed, badly fed, sickly, or alcoholic, and they cannot be fulfilled if she has to contribute to the family income. If the women of

the nation are to retain their health, and if the infants are to have a fair chance of surviving, women must stay at home to suckle and to "mother" their children. No arrangements, however good, and no food, however well devised, can be an adequate substitute for motherly love and the milk suitable to the individual child.

Mortality of Infants.

Much that has been said about the mother's dangers and necessities applies to those of the unborn fœtus and of the infant after birth. But, in addition to the troubles he shares with his mother, there are some peculiarly his own. With his mother he suffers from unhealthy surroundings, from lack of warmth, from semi-starvation, from the actions of micro-organisms and of toxins. With his mother he suffers, and sometimes dies, from want of comfort and from want of skilled attendance during parturition and puerpery, but in addition to these devastating evils he has to encounter the dangers of bronchitis, pneumonia, measles, and whooping-cough. Also on the child fall the worst results of the insanitation and of bad milk, which reach appalling proportions during so-called "beautiful summers."

Remedies for Maternal and Infantile Mortality.

The remedies for many causes of maternal and infantile mortality cannot be discussed here. They are long overdue, and are most urgently required, such, for instance, is the raising of wages so as to enable an ordinarily sober and thrifty couple to provide adequately for their own wants and those of their family. An improved system of education by virtue of which our people, and more especially our women, should learn the elementary principles of domestic hygiene and sanitation.

Provision of healthy and sufficient housing for our urban and rural population, with special attention to water supply, adequate drainage and sanitary conveniences.

Provision of hospital accommodation for pregnant women who are ill, and of rest homes for those who are weary. The multiplication of schools for mothers, of infant welfare centres, and the provision of free or cheap meals for expectant and for nursing mothers.

All these and many more remedies are urgently needed, and yet if one want is more urgent than another it is an increased and better distributed supply of midwives.

In Volume II. of the Carnegie Report Dr. Janet Campbell tells us that 75 per cent. of all the parturient women of England and Wales are attended by midwives. To meet this demand a much larger supply of midwives is necessary. At the present time many women who qualify as midwives do so not in order to practise as midwives, but to obtain an additional qualification for some other appointment, such as monthly and gynæcological nurses, health visitors, and superintendents of schools for mothers.

There is little wonder that relatively few women wish to be practising midwives. They are at the call of the public night and day, they are badly paid, and they do not receive an adequate measure of consideration and appreciation. In short, their work is constant, strenuous, and responsible, while their remuneration and social status are quite incommensurate.

Among the extraordinary demands made on a midwife two stand out as absolutely indefensible. She has to provide her own instruments, appliances, and antiseptics and drugs, and, much worse, should a midwife consider that her patient needs the skill of a doctor to ensure her safety, the midwife is responsible for the doctor's fee! Such an arrangement greatly increases the midwife's reluctance to avail herself of the doctor's services, indeed, in many cases it must amount to prohibition.

Dr. Janet Campbell furnishes a most interesting record of the history of midwifery, both in England and Wales and in many foreign countries, but, after all, the most interesting and useful part of her delightful pages is that devoted to the difficulties and disabilities of all midwives, and to the hopeful and practical suggestions she makes for the improvement of their education, qualification, remuneration, and status.

Within the limits of this paper it is not possible to do more than to refer to the fourth volume of the Report. It deals with maternal and infantile welfare in Ireland, and is of the deepest interest. The third volume, concerning these subjects in Scotland, is not yet published.